The CAP intervention: An integrated approach to prevention in schools

Nicola Newton
Senior Research Fellow
National Drug and Alcohol Research Centre, University of New South Wales, Sydney, Australia
Acknowledgements

**Chief Investigators**
Prof Maree Teesson (NDARC), A/Prof Patricia Conrod (Université de Montréal) & Dr Tim Slade (NDARC).

**CAP study research team**
Dr Emma Barrett, Katrina Champion, Julia Rosenfeld, Erin Kelly & Lucie Swaffield.

**Schools**
Students and teachers at participating NSW and VIC schools.

**Funding**
National Health and Medical Research Council - APP1004744.
Why prevent?

Adolescent substance use:
- 18% teenagers drinking weekly
- 33% risk alcohol-related injury monthly
- 25% tried an illicit drug

(Australian National Drug Strategy 2010)

Early initiation:
- substance use disorders (Behrendt et al. 2009)
- co-morbid mental health problems (Rohde, 1996)
- Poor academic performance/drop out (Zeigler et al. 2005)
- Neuropsychological deficits (Tappert et al, 2001; Squeglia et al. 2009)
Types of prevention

1. **Universal:** entire population regardless of level of risk
2. **Selective:** target groups at greatest risk of developing problems
3. **Indicated:** experiencing early symptoms of a disorder (early intervention)
Universal ‘Climate Schools’ programs
Newton, Teesson, Vogl & Andrews

Aim: prevent alcohol and cannabis use in adolescents & overcome barriers to implementation

✧ Social influence approach
✧ harm-minimisation goal
✧ Internet-based
✧ Easy to implement
✧ Embedded in curriculum
✧ Interactive – cartoons & activities
Climate Schools modules

Two modules for Year 8 students (13-14yrs)

- Alcohol module (Vogl et al, 2006)
- Alcohol and Cannabis module (Newton et al, 2007)

Module = 6 lessons of...

- 15 min online
- 25 min class activities

Covering...

- Alcohol guidelines and laws
- Normative use
- Short & long term risks
- Influences of media / peers
- Drug refusal and minimization skills
- Staying safe & first aid
Part 1: Student online component

www.climateschools.com.au
Every time she drinks it ends in tears.
I'm getting sick of this.
I just want to die.
Do you want to go home?
No, I feel too sick.
Aaaah Foul!
Part 1: Student online component

Student summaries

**Alcohol and the Law**

- The legal drinking age is 18 years of age.
- It is generally illegal to sell or supply alcohol to a person under the age of 18 years.
- However, it is legal to supply alcohol to the person if they have been given it by a parent or guardian when it is under their personal control.
- A person or guardian can supply alcohol to the person if they are under their personal control.

- A person who supplies alcohol to a person under the age of 18 years may be convicted of an offence if it is proved that the person was under the age of 18 years at the time the alcohol was supplied.

- A person who supplies alcohol to a person under the age of 18 years may be convicted of an offence if it is proved that the person was under the age of 18 years at the time the alcohol was supplied.

**How much alcohol do 18-19 year olds drink?**

Many teenagers believe that they are drinking large quantities of alcohol and are getting away with it. This belief is false. The truth is that 18-19 year olds do not drink more than older teenagers do.

As with other teenagers, those who use alcohol are more likely to get drunk than those who do not use alcohol. The amount of alcohol consumed by 18-19 year olds is not significantly greater than that of older teenagers.

When it comes to drinking in general, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.

**How much alcohol do 18-19 year olds drink?**

- The average amount of alcohol consumed by 18-19 year olds is about 60 units per week.
- This is similar to the amount consumed by older teenagers.
- However, it is important to remember that alcohol is a drug and it is illegal to drink alcohol.
Part 2: Teacher activities

Teacher manual
Efficacy of Climate Schools

Two RCTs in Australia & a pilot trial in the United Kingdom

(> 3000 students from 30 schools)

- binge drinking & av. consumption of alcohol
- frequency of cannabis use
- alcohol related harms and positive expectancies
- alcohol & cannabis knowledge

Can we do more?

- Although significant, Effect Sizes (ES) for substance use outcomes (< 0.38) were modest - comparable to universal programs (AOD & MH)

- High-risk kids do better with targeted approaches - greater ES for substance use outcomes - risk for substance use is multifaceted (not just social influence)

Can we improve effects by adding a ‘selective’ component for high-risk students?
Climate And Preventure (CAP)

Aim: maximize prevention outcomes for low- and high-risk profiles

‘universal’ Climate Schools + ‘selective’ Preventure = CAP

PREVENTING SUBSTANCE USE AND RELATED HARMs IN ADOLESCENTS
Selective ‘Preventure’ program
Conrod, Castellanous-Ryan, Mackie, O-Leary-Barrett et al.

- Selective (personality-targeted) school-based prevention program

**Aim:** to increase coping skills to prevent alcohol use and risky behaviour in ‘high-risk’ adolescents

- Targets 4 personality profiles that are linked to adolescent substance misuse/specific patterns of psychopathology (Woicik et al., 2009)

<table>
<thead>
<tr>
<th>Personality profile</th>
<th>Substance misuse</th>
<th>Psychopathology vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Thinking (NT)</td>
<td>Early onset AOD use</td>
<td>Depression</td>
</tr>
<tr>
<td>Anxiety Sensitivity (AS)</td>
<td>Later onset of alcohol misuse (young adulthood)</td>
<td>Panic-related anxiety disorders</td>
</tr>
<tr>
<td>Impulsivity (IMP)</td>
<td>Engage in high risk, externalising behaviours e.g. AOD use</td>
<td></td>
</tr>
<tr>
<td>Sensation Seeking (SS)</td>
<td>Predisposition to binge drinking</td>
<td></td>
</tr>
</tbody>
</table>
Preventure program

Step 1: Screen using Substance Use Risk Profile Scale (SURPS)

- Assesses variation in personality risk for substance abuse/dependence along 4 dimensions: NT, AS, IMP, SS

Step 2: Invite ‘high-risk’ students to take part in interventions:

- 2 x 90 min coping skills workshops (NT, AS, IMP, SS), delivered by a facilitator and a co-facilitator
- Based on: Motivational Interviewing (MI) and CBT components
  - MI: goal setting & pros and cons
  - CBT: identify personality-specific cognitive distortions & challenge unhelpful thoughts
Efficacy of Preventure

• RCTs in Canada and the UK with high-risk youth (by clinical psychologists and educational professionals)

- uptake of alcohol use, binge drinking & illicit drug use
- av. consumption of alcohol use
- motivations to drink alcohol
- alcohol related harms
- depression in NT and anxiety in AS

❖ Effective selective prevention program

Stage 1

Modify Preventure for Australian adolescents
Stage 1 Method

- Nine schools approached, 3 agreed to participate (1m, 2f)

- **Students**
  - N = 69; Mean age 13.5yrs (SD = 0.76); 32% male
  - Informed consent (student and parent)
  - Screened with the SURPS & ‘high risk’ students invited to participate
  - 10 focus groups (5-8 students), approx 90mins
    - Questionnaire & manuals (specific to their personality type), encouraged to provide feedback verbally/on post-it notes

- **Teachers (n = 6) and health professionals (n = 5)**
  - N = 11; mean age 28.6yrs (SD = 2.30); 27% male
  - Teachers sent a questionnaire and copies of the 4 manuals
  - Health professionals participated in a focus group
Stage 1 Results

Students (N=69)
- 100% recommend changes to content/language/scenarios
- 96% recommend changes to graphics/layout
- Provided good suggestions:
  - Scenarios – why would/wouldn’t drink, Personality specific scenarios
    - more male, and more multicultural scenarios
  - Graphics/Vocab – general appearance, characters, names (Kayleigh > Lucy), places, activities, technology*

Teachers/health professionals (N=11)
- Indicated the program was already appropriate in terms of learning, educational content, student acceptability, and efficacy
- Manuals to be updated and made more relevant for Australian adolescents (scenarios, graphics, vocab)
Modified Preventure manuals
Stage 2

Establish the efficacy of the CAP intervention
Stage 2 Method

- 4 arm cluster RCT with Year 8 students (high school)
  1. ‘Climate Schools’ only
  2. ‘Preventure’ only
  3. CAP (Climate and Preventure)
  4. Control (TAU)

- Ethics approval / trial registry:
  - UNSW ethics committee
  - Catholic Education Office (CEO) ethics committee
  - State Education Research Approval process (SERAP)
  - Australian and New Zealand Clinical Trials Registry (ANZCTR)
Recruitment/consent

Recruited
27 schools (18 private, 9 public)
Total students: 3,360

Parental consent/return
2,612 students (78%)

No consent / return
No consent: 78 (2.3%)
No return: 670 (19.9%)

CONTROL
7 schools
Students: 612

CLIMATE ONLY
7 schools
Students: 711

PREVENTURE ONLY
7 schools
Students: 615

CAP
6 schools
Students: 674

Student consent / present at baseline
2,278 students (87%)
Baseline/screening/intervention

<table>
<thead>
<tr>
<th>Group</th>
<th>Baseline surveys</th>
<th>Screened for risk using SURPS</th>
<th>High risk (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL</td>
<td>527</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLIMATE ONLY</td>
<td>659</td>
<td>234 (44.4%)</td>
<td></td>
</tr>
<tr>
<td>PREVENTURE ONLY</td>
<td>481</td>
<td>275 (41.6%)</td>
<td></td>
</tr>
<tr>
<td>CAP</td>
<td>611</td>
<td>211 (43.9%)</td>
<td></td>
</tr>
</tbody>
</table>

TAU

Climate Schools

Prevention (high-risk only)

CONTROL

Baseline surveys

CLIMATE ONLY

Baseline surveys

PREVENTURE ONLY

Baseline surveys

CLIMATE ONLY

Baseline surveys

PREVENTURE ONLY

Baseline surveys

Climate Schools

Prevention (high-risk only)
Primary aims

1. Examine if the CAP intervention is more effective than; (1) TAU and (2) stand-alone ‘universal’ prevention, in reducing:
   - uptake and harmful use of alcohol
   - alcohol related harms
   - mental health symptomatology

2. For high-risk students, to examine if the ‘selective’ Preventure program is more effective than; (1) TAU and (2) stand-alone ‘universal’ prevention in reducing:
   - uptake and harmful use of alcohol
   - alcohol related harms
   - mental health symptomatology

Sample size: Powered to detect differences in overall sample and high-risk students only (40%).
Measures

- **Screening for high-risk students:** SURPS - assesses personality risk for substance misuse along 4 dimensions (NT, AS, IMP, SS)
- **Alcohol use:** Binge drinking (5+ standard drinks) and av. consumption of alcohol use (QxF)
- **Alcohol related harms:** abbreviated version of the Rutgers Alcohol Problem Index (RAPI)
- **Mental health symptoms:** Depression and Anxiety subscales from Brief Symptom Inventory (BSI)
- **Other secondary outcomes:** other drug use, intentions to use drugs, drug related knowledge & attitudes, internalising & externalising problems, bullying, truancy, aggression, self-efficacy to resist peer pressure.
## Assessment times

<table>
<thead>
<tr>
<th>Time</th>
<th>Baseline Survey</th>
<th>Climate Schools program</th>
<th>Preventure program (high-risk students only)</th>
<th>6 month F/U</th>
<th>12 month F/U</th>
<th>24 month F/U</th>
<th>36 month F/U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>Year 8</td>
<td>Year 8</td>
<td>Year 8</td>
<td>Year 8</td>
<td>Year 9</td>
<td>Year 10</td>
<td>Year 11</td>
</tr>
<tr>
<td>CO</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAP</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*CO: Control group, CL: CLIMATE only group, PREVENTURE only group, and CAP: CLIMATE plus PREVENTURE group.
Baseline sample characteristics

Participants: 2,278 students from 27 high schools (9 public, 18 private)

Gender: 57.2% male

Age: median -13yrs

Background:

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>86.3</td>
</tr>
<tr>
<td>Other (mainly England, China, New Zealand, Korea, Philippines, South Africa, USA)</td>
<td>13.7</td>
</tr>
</tbody>
</table>
Baseline characteristics

Substance use % (N=2278)

Ever tried alcohol (sip) 63 65
Full serve alcohol 17 23
Ever binged (5+) 4 2
Ever tried cannabis 3 5

CAP data (N=2278)
NDSHS 2010 (13-14yrs)
Baseline characteristics

Perceived use % (N=2278)

- Tried any alcohol (sip): Perceived use 58%, Actual use 63%
- Drink to get drunk: Perceived use 27%, Actual use 7%
- Tried cannabis: Perceived use 16%, Actual use 3%

Legend:
- Purple: Perceived use
- Green: Actual use
What do the CAP students think?

• What did you like about the sessions?
  – ‘It helped us reflect on who we are and what we aim for’
  – ‘We found out real stories of children in Australia and that it is not just us’
  – ‘It helped me identify and challenge my bad thoughts and feelings’

• What didn’t you like about the sessions?
  – ‘More lollies!’
  – ‘Homework’
  – ‘It takes up lesson time – perhaps lunch?’
Email: nickien@unsw.edu.au
Website: www.capstudy.org.au